Claims

1. Method for production of a component, comprising a micro-structured substrate (3) and a complementary element (7, 10) assembled by means of an assembly joint (4), method characterized in that it comprises fabrication of the assembly joint by:

- a first step of deposition of a thin layer of polymer (2) on a transfer substrate (1, 11), the transfer substrate and the thin polymer layer having a predetermined chemical affinity,
- a second step of bringing the micro-structured substrate (3) and the thin polymer layer (2) into contact, the micro-structured substrate and the thin polymer layer having a greater chemical affinity than the chemical affinity between the transfer substrate (1, 11) and the thin polymer layer,
- a third step of removing the transfer substrate (1, 11) so that the assembly joint (4) is formed by the zones of the thin polymer layer (2) coming into contact with the micro-structured substrate (3) in the course of the second step.

2. Method for production according to claim 1, characterized in that it comprises a cross-linking step of the thin polymer layer (2) between the first and second steps.

3. Method for production according to one of the claims 1 and 2, characterized in that it comprises a chemical activation step of the thin polymer layer (2) deposited on the transfer substrate (1, 11) between the first and second steps.

4. Method for production according to any one of the claims 1 to 3, characterized in that it comprises a chemical activation step of the micro-structured substrate (3) between the first and second steps.

5. Method according to any one of the claims 1 to 4, characterized in that the transfer substrate (1, 11) is flexible and removal of the transfer substrate is performed by pulling the latter via one end.

6. Method according to any one of the claims 1 to 5, characterized in that the transfer substrate (1, 11) is made from Polydimethylsiloxane (PDMS).

7. Method according to any one of the claims 1 to 6, characterized in that it comprises, after the third step, a chemical activation step of the assembly joint (4) arranged on the micro-structured substrate (3).

8. Method according to any one of the claims 1 to 7, characterized in that it comprises a chemical activation step of the complementary element (7, 10).

9. Method according to any one of the claims 1 to 8, characterized in that the micro-structured substrate (3) comprises at least one bearing zone (8) acting as support for the transfer substrate (1, 11) in the course of the second step.

10. Method according to any one of the claims 1 to 9, characterized in that the transfer substrate (1) is flat.

11. Method according to any one of the claims 1 to 9, characterized in that the transfer substrate is micro-structured (11).

12. Method according to any one of the claims 1 to 11, characterized in that the polymer material of the thin polymer layer (2) is chosen from among thermohard resins, elastomers and elastomer thermoplastics.

13. Method according to claim 12, characterized in that the polymer material of the thin polymer layer (2) is Polydimethylsiloxane (PDMS).

14. Component, produced by the method according to any one of the claims 1 to 13, characterized in that the complementary element is a cover (7).

15. Component, produced by the method according to any one of the claims 1 to 13, characterized in that the complementary element (7) is another microstructured substrate.

16. Component, produced by the method according to any one of the claims 1 to 13, characterized in that the complementary element is a capillary (10) or a matrix of capillaries secured to one another.